Exercises - Problems Sheet # 3: String, Structures, and Enumeration

Spring 2024

No. Of Questions: 9 **No. Of Pages: 2**

Answer the following:

1) Write a C function that concatenates two input strings S1 and S2 in string S1.

2) Write a C program that reads 10 characters from the user, and then searches for the position of the character z.

3) Write a C program that reads string S1 and certain letter from the user, then call your own function that return the number of occurrences of the given character in the given string.

4) Write a C function that take two strings (array of characters) and return one if the 1st is part of the 2nd and zero otherwise

5) Write a C code to reverse a string by recursion.

6) Write a function ``replace" which takes a string as a parameter and replaces all spaces in that string by minus signs and delivers the number of spaces it replaced.

7) What is the output of these codes?

a)

0 2 1

```
int main()
{
    enum status {pass, fail, absent};
    enum status stud1, stud2, stud3;
    stud1 = pass;
    stud2 = absent;
    stud3 = fail;
    printf("%d %d %d\n", stud1, stud2, stud3);
    return 0;
}
```

b)

-1, 0, 6, 7, 8, 9

```
int main()
{
    enum days {MON=-1, TUE, WED=6, THU, FRI, SAT};
    printf("%d, %d, %d, %d, %d, %d\n", MON, TUE, WED, THU,
FRI, SAT);
    return 0;
}
```

8) Declare a structure Employee with id_no, salary, birth_date – which is day, month, and year- id for 5 tasks the employee has. For example the data for an employee may be: id_no = 5, salary = 7500, birth_date = { day= 3, month= 8, year = 1980}, tasks_ids = {1, 3, 4, 9, 12}.

a) For the previous declaration, write a function which input one employee data.

b) For the previous declaration, write a function which take an array of employee's data and an id_no, the function should search for that employee in the employees array and return his salary, or return -1 if the employee id not found.

c) Use all the previous in a program that enter data for 5 employees, then the program takes one id_no for an employee, search for it, if found return his salary, otherwise write "NOT FOUND".

9) Show the output:

16

```
main() {
    struct s {
        double x;
        int  y;
    } a_struct;
    printf("The size of a_struct: %d-byte\n",
sizeof(a_struct));
}
```

With our best wishes;